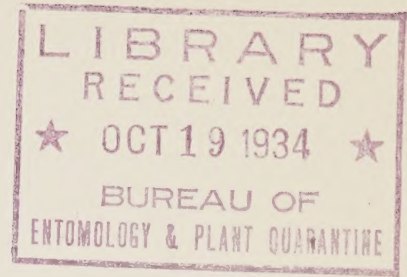


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.9
In 8655c



UNITED STATES
DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

SUMMARY OF CHINCH BUG CONTROL CAMPAIGN

1934

Prepared for Chinch Bug Conference at Hamilton, Ill., Sept. 5, 1934.

CONTENTS

	Page
I. Appropriation	1
II. Federal and State Organization.	1
Federal Organization.	1
State Organization.	2
III. Extent of Infestation	2
IV. Allotments of Materials	2
V. Materials Used and Distribution by States	4
VI. Rate of Delivery	4

SUMMARY OF CHINCH BUG CONTROL CAMPAIGN OF 1934

Prepared for Chinch Bug Conference at Hamilton, Ill., Sept. 5, 1934,
by

P. N. Annand, In Charge, Division of Cereal and Forage Insects,
Bureau of Entomology and Plant Quarantine.

The campaign for chinch bug control was conducted cooperatively by the United States Department of Agriculture and the States of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, and Michigan.

I. Appropriation.

Recognizing the threatened chinch bug outbreak as a serious menace to the corn crop in the Corn Belt, Congress appropriated \$1,000,000 to the Department of Agriculture to be used cooperatively with the infested states for the control of this pest. Funds under this appropriation became available June 8 -- too late for maximum effectiveness in much of the infested area. The lateness of the appropriation required the utmost speed in the purchase and delivery of materials in order to have these available to the growers in time to stop the migration of the bugs from small grains to corn.

II. Federal and State Organization.

The Secretary of Agriculture designated the Bureau of Entomology to direct the Federal phases of the control program and, in accordance with the terms of the appropriation, directed that the control campaign in the states be under the supervision of a State Chinch Bug Control Committee. This committee was made responsible for the appointment of a state leader and for the allotment and distribution of the barrier materials within the respective states.

(A) Federal Organization

The control campaign was placed under the direction of the Division of Cereal and Forage Insects. Headquarters were established at Minneapolis in order to utilize the efficient office staff already organized by B. M. Gaddis in connection with the grasshopper campaign. The availability of this organization, including stenographers, bookkeeper, traffic clerk, and purchasing officers, saved days in getting shipments under way and avoided many errors in shipping and purchasing which would have been inescapable with an inexperienced organization.

State assistants on Federal funds were furnished in cases where it was absolutely necessary to the proper conduct of the campaign.

Such aid was given to Indiana, Missouri, and Minnesota. These assistants were intended primarily to aid in organization, in conducting barrier demonstrations, and in directing the campaign in the field. They were not employed beyond the time required for these activities.

Assistance in organization and getting the campaign under way was also given through M. P. Jones, who spent most of the month of June in the infested area assisting with the campaign and observing relative infestations and results being secured.

The overhead was remarkably low with this organization, almost all of the funds going for materials and transportation.

(B) State Organization

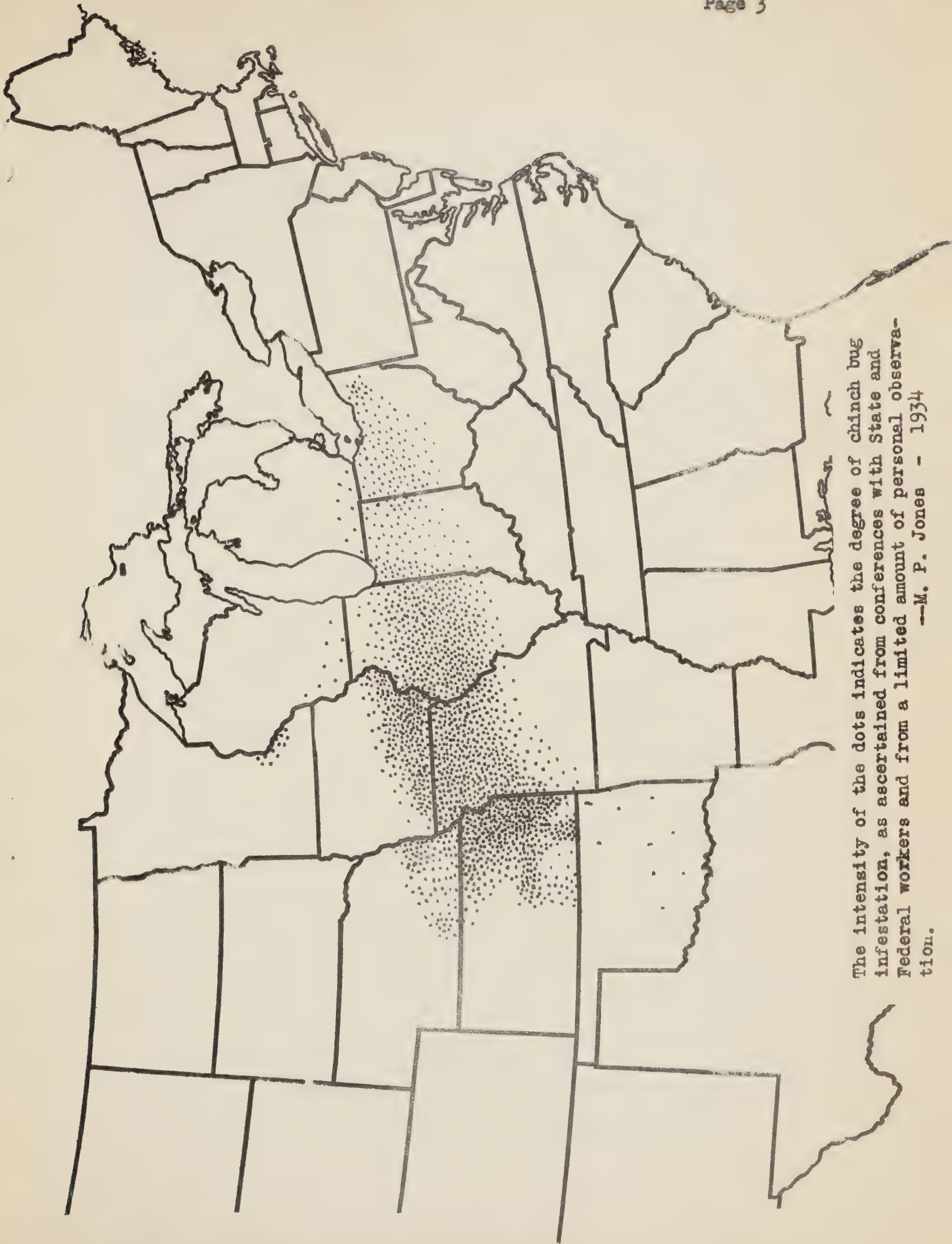
The State Chinch Bug Control Committees consisted of from 2 to 7 members. The state leaders were entomologists of the experiment stations, extension entomologists, or state entomologists depending on the organization in the states concerned. The distribution organization was built around the county agents of the Extension Service. The state organizations were built up in a remarkably short time and were responsible for the effective use of the materials. As a rule, barrier materials were not issued except on requisition from the county agent.

III. Extent of Infestation.

The following states had infestations severe enough to require extensive control measures: Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, and Michigan. The most serious and widespread infestations were in Illinois, Missouri, Iowa, and Kansas. Migration in Ohio, Minnesota, and Michigan began much later than in other areas and some materials had to be reserved for their use. Minor injury was reported from Wisconsin and New York. (See map, Page 3.)

IV. Allotments of Materials.

In order to provide some basis for distribution of shipments to avoid inequitable distribution, it was necessary to use some basis for allotments. As a preliminary basis, the acreage by counties of susceptible small grains and corn was obtained from the latest available census report. Allotments were made on the basis of an estimated total available supply of 4,600,000 gallons. Proportionate division of this material was made according to the acreage of small grains and corn in counties known to be infested, the lower of these two figures being used. Estimates of the state entomologists as to severity of infestation were also considered. In Illinois, Indiana, Iowa, Missouri, Michigan, and Ohio the estimates and original allotments were low and were increased from unallotted balance and surplus from other states. In Nebraska, Oklahoma, and Minnesota the allotments were more than required. This surplus was reallocated as soon as it was recognized that it would not be needed. In Kansas the early estimate and allotment were very close to the actual



The intensity of the dots indicates the degree of chinch bug infestation, as ascertained from conferences with State and Federal workers and from a limited amount of personal observation.

--M. P. Jones - 1934

demand. There was no precedent to aid in determining the amounts likely to be required. It was recognized that extensions and intensities of infestation, maturity of small grains, speed of delivery, and climatic conditions would affect the total amounts required by the various states and the allotments were kept as flexible as possible to provide for the various shifts necessary as the campaign progressed.

The allotments made throughout the campaign are given in Table 1.

V. Materials Used and Distribution by States.

Purchase of materials was limited generally to creosote of Federal Specification TT-W-556, Grade 1 (American Wood Preservers Association Specification No. 4-C). When it was necessary to hold the bugs until the arrival of the shipments of creosote, gas tar was purchased for local delivery upon recommendation of the state leader. A summary of the deliveries of creosote and other oils by companies and states is given in the accompanying Table 2.

Table 3 gives the number of tank and drum carloads shipped to each state.

Creosote in drums cost 13 1/2¢ to 15¢ per gallon; in tank cars 11¢ f.o.b. shipping point.

VI. Rate of Delivery.

Delivery by tank cars could be obtained much more rapidly and economically than in drums due to the delay entailed in obtaining and filling the latter. Purchase in drums was also more expensive and total freight charges were higher. Shipments of tank cars were loaded and consigned to the railroads on the ninth of June although the funds were not available until June 8. Some shipments in drums were made on the ninth but heavy shipments in drums were not being made until the 12th.

Table 4 gives the rate of shipment to the various states from June 9 to 30. It will be noted that the heaviest shipments of the campaign were made on the 13th and 14th, after which time orders for shipment kept pace with the state requests--orders being placed the day the state request was received. The excellent cooperation given by the supplying companies and the railroads was a big factor in getting prompt deliveries.

A map showing the approximate deliveries by counties is given on Page 9. There will be minor discrepancies between the figures here given and state records as they are in some cases based on delivery points from which distribution may have been made to other counties. However, the general distribution of the creosote is indicated.

Table 1.--Allotments of Barrier Oil Made to States

State	June Allotments As Of --				Final Allotment
	8th	18th	20th	22nd	
Illinois	800,400	1,250,000	1,351,400	1,351,400	1,364,338
Indiana	184,000	250,000	400,000	400,000	534,187
Iowa	462,800	1,250,000	1,648,000	2,023,564	2,023,564
Kansas	400,000	400,000	450,000	450,000	435,038
Michigan		19,000	40,000	40,500	104,154*
Minnesota		17,000	17,000	95,000	77,685
Missouri	478,400	900,000	994,850	1,109,850	1,189,683
Nebraska	473,200	473,200	473,200	173,200	104,950
Ohio				40,000	198,937
Oklahoma	33,000	33,000	33,000	9,000	9,000
Total					6,041,536

*All local purchases of gas tar.

TABLE 2.--CREOSOTE AND OTHER BARRIER OILS

DELIVERIES BY STATES AND COMPANIES

State	American Tar & Chemical Company	The Barrett Company	Inland Tar Company	Koppers Products Company	Lewis Tar Products Company	Reilly Tar & Chem- ical Corp.	The Rubberoid Company	Local Firms (Oils other than creosote)	TOTAL	TOTAL COST (Exclusive of freight)
	Gallons	Gallons	Gallons	Gallons	Gallons	Gallons	Gallons	Gallons	Gallons	
Ind.		10,185	98,973 ¹	124,651	12,960	287,418 ¹			534,187	\$72,319.52
Ill.		384,812	337,012	124,126 ¹		261,387 ¹	146,915 ¹	110,086	1,364,338	182,096.21
Iowa		762,432	104,635	753,221		248,768		154,508	2,023,564	212,465.35
Kans.		336,400		50,400		48,238			435,038	64,800.85
Minn.	77,685								77,685	10,875.90
Mo.		317,670		513,772		315,576		42,665	1,189,683	163,274.60
Neb.		19,950		65,000		20,000			104,950	15,459.70
Ohio		81,815 ¹		26,215 ¹		49,390		41,517	198,937	25,377.89
Okla.		3,000		6,000					9,000	1,350.00
Mich.								104,154	104,154	8,033.46
Total by Co's.	77,685	1,916,264	540,620	1,663,385	12,960	1,230,777	146,915	452,930	6,041,536	\$756,053.48

¹Amounts include local deliveries

Table 3.--Tank Car and Drum Shipments

<u>State</u>	<u>Tank Cars</u>	<u>Carloads of Drums</u>	<u>Total Carloads</u>
Illinois	42	152	194
Indiana	15	113	128
Iowa	188	2	190
Kansas	---	115	115
Michigan	Local Deliveries	Local Deliveries	---
Minnesota	---	19	19
Missouri	23	206	229
Nebraska	---	25	25
Ohio	1	29	30
Oklahoma	---	3	3
Total	269	664	933

TABLE 4.--CREOSOTE SHIPMENTS BY DAYS JUNE 9 TO 30
GALLONS ORDERED SHIPPED

Date	Illinois	Indiana	Iowa	Kansas	Missouri	Nebraska	Ohio	Oklahoma	Minnesota	Totals
JUNE 9	10,000		270,000							280,000
11	6,000		10,000	129,000	55,000					200,000
12	110,000	12,000	130,000	126,000	138,750					516,750
13	268,000	27,000	40,000	83,000	296,100	10,000				724,100
14	250,500	19,000	263,000	43,000	112,500	9,000		3,000		700,000
15	117,000	36,000	100,000	13,000	57,500			6,000		329,500
16	71,000	63,000	200,000		30,000					364,000
17										
18		91,000	215,000		78,000	10,000				394,000
19	176,000		170,000	8,000	69,000	10,000				433,000
20		21,000		3,000	65,000					89,000
21		41,000	240,000		50,000		5,000			336,000
22		38,000	140,000				5,000			183,000
23		18,000	110,000		55,000		18,000		54,000	255,000
24										
25		67,000			38,000		3,000			108,000
26		32,000			82,000		81,000			195,000
27		3,000				10,000	13,000		8,725	34,725
28							24,900		10,870	35,770
29										
30		100,000					8,215			108,215



CHINCH BUG CAMPAIGN
1934

Distribution of Federal creosote in thousands of gallons by counties. These figures are approximate only and are based on state reports of distribution in Illinois, Ohio, Michigan and Oklahoma. In Minnesota, Nebraska, Missouri, Indiana, Kansas and Iowa distribution figures are based on delivery points and may not agree exactly with actual use of materials by counties. The upper figures represent approximate gallons of Federal creosote; the lower indicates amount purchased by other agencies where this data is available. Some states other than those indicated also purchased materials in addition to that furnished by the Government.

